

METHANOL FACTS

CARBON RECYCLING INTERNATIONAL

THE CO₂ TO LIQUID COMPANY

WHO IS CARBON RECYCLING INTERNATIONAL?

Carbon Recycling International (CRI) was founded in 2006 in Reykjavik, Iceland to develop and market a process for producing fuel from industrial carbon dioxide (CO₂) emissions. In 2007, the MI member company opened a pilot plant in Reykjavik, Iceland and demonstrated the feasibility of its Emissions-to-Liquid fuel production process. CEO K.C. Tran expects CRI to scale up production to an “industrial scale” by September 2011 with a 5-million liter a year plant which will convert the CO₂ emissions of the HS Okra power station into renewable methanol. In addition, CRI has announced tentative plans to build a CO₂ to methanol plant in Northern Iceland which would use the emissions from Landsvirkjun’s 60 MW geothermal facility in Krafla to produce over 100 million liters of methanol annually.

HOW IS RENEWABLE METHANOL PRODUCED?

The CRI process consists of capturing CO₂ from geothermal or industrial emissions and manufacturing synthetic automobile fuel, such as Renewable Methanol, from emissions and hydrogen produced through electrolysis of water with renewable energy. Like ethanol, RM can be blended with gasoline for a high-octane fuel and 3% methanol is allowed in regular unleaded gasoline under the EU standard for unleaded gasoline. Methanol is also an important ingredient in the production of biodiesel. RM, made from renewable energy, is recognized by EU regulations as a renewable fuel. As RM is produced from electricity and emissions, it can also be considered as an energy carrier, capable of harnessing stranded intermittent or off-peak power, thus capturing energy from geothermal, wind, hydroelectric, and solar, i.e. all forms of variable or stranded renewable sources of electric power. In essence, RM is liquid electricity for cars.

WHAT ARE THE ADVANTAGES OF RENEWABLE METHANOL?

CRI will be the first company worldwide to produce renewable fuel on a commercial scale from CO₂ emissions. The reduction of greenhouse gases (GHG) emitted by manufacturing and transportation through the reuse of CO₂ emissions can make a major contribution to mitigating climate change and increasing sustainability. Current alternative fuels for vehicles such as ethanol and biodiesel are produced using fossil fuel inputs and scarce agricultural resources. These fuels are thus subject to the volatility of feedstock or food markets, as well as natural variability. In contrast, RM production requires small amounts of land, eliminates CO₂ and is based on chemical processes with predictable inputs and costs.

CEO - K.C. TRAN

“WE OFTEN DESCRIBE OUR TECHNOLOGY AS LIQUID ELECTRICITY BECAUSE WE STORE THE ELECTRICITY IN THE FORM OF LIQUID, FOR CONSUMPTION IN TODAY’S INTERNAL COMBUSTION ENGINE BASED CARS. IT IS SIMILAR TO STORING ELECTRICITY IN A BATTERY. WE CAPTURE CO₂ AND TURN IT INTO RENEWABLE METHANOL FOR GASOLINE BLENDING IN THE US AND EU.”



**CARBON RECYCLING
INTERNATIONAL**

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